

Title (en)

METHOD AND APPARATUS FOR PRODUCING SILICON CARBIDE SINGLE CRYSTAL

Title (de)

VERFAHREN ZUR HERSTELLUNG VON SILIZIUMKARBIDEINKRISTALLEN

Title (fr)

PROCEDE ET APPAREIL PERMETTANT DE PRODUIRE UN CRISTAL UNIQUE DE CARBURE DE SILICIUM

Publication

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Application

EP 98941856 A 19980911

Priority

- JP 9804128 W 19980911
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- US 8660598 P 19980522

Abstract (en)

[origin: WO9914405A1] A method and apparatus for producing continuously and at a high speed a high quality silicon carbide single crystal under a stable condition. The method comprises passing a vaporized gas from a silicon starting material through a heated carbon material, causing the gas to arrive at a seed crystal substrate and growing the silicon carbide single crystal on the substrate. The apparatus comprises a portion for filling a silicon starting material (5) at a lower part thereof, a seed crystal substrate (2) at the top thereof, and carbon materials (31 and 32) disposed at an intermediate part between the portion for filling the silicon starting material (5) and the seed crystal substrate (2) in such a manner that a vaporized gas from the silicon starting material (5) can pass through them. Porous carbon structures, carbon plates having a large number of through-holes, packed carbon granular bodies, etc. can be used as the carbon material.

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C30B 29/36

IPC 8 full level

C30B 23/00 (2006.01)

CPC (source: EP)

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Citation (search report)

- [X] EP 0712150 A1 19960515 - UNIV NORTH CAROLINA STATE [US]
- [X] DE 4310745 A1 19941006 - SIEMENS AG [DE]
- [E] US 5895526 A 19990420 - KITOY YASUO [JP], et al
- [X] PATENT ABSTRACTS OF JAPAN vol. 1997, no. 06 30 June 1997 (1997-06-30)
- See references of WO 9914405A1

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